

What is claimed is:

1 1. A wireless access point comprising:
2 a memory to store information relating to services available in an associated
3 network;
4 a wireless transceiver to provide wireless communication with one or more
5 wireless client devices; and
6 a controller to generate a services signal using service related information from
7 said memory and to cause said wireless transceiver to transmit said services signal.

1 2. The wireless access point of claim 1, wherein:
2 said controller includes a service abstraction unit to parse service information
3 received from a service discovery server and store said service information in said
4 memory.

1 3. The wireless access point of claim 1, wherein:
2 said services signal is transmitted as part of a beacon signal transmitted by said
3 wireless transceiver.

1 4. The wireless access point of claim 1, wherein:
2 said wireless access point is programmed for use within a wireless network that
3 utilizes medium access control (MAC) frames, wherein said services signal is
4 transmitted as part of a frame body of a MAC frame.

1 5. The wireless access point of claim 4, wherein:
2 said services signal includes one or more information elements within said
3 frame body of said MAC frame.

1 6. The wireless access point of claim 5, wherein:
2 said frame body of said MAC frame also includes information relating to a
3 service advertisement frequency.

1 7. The wireless access point of claim 1, wherein:
2 said services signal describes services using an extensible markup language
3 (XML).

1 8. The wireless access point of claim 1, wherein:
2 said services signal describes services using a format that is readable within a
3 data link layer of the associated network.

1 9. The wireless access point of claim 1, wherein:
2 said controller is programmed to generate said services signal in response to a
3 request received from a wireless client device.

1 10. The wireless access point of claim 1, wherein:
2 said controller is programmed to broadcast services signals at predetermined
3 intervals.

1 11. A wireless access point, comprising:
2 a memory; and
3 a controller to receive information about services available within an associated
4 network from at least one service discovery server and to store the information in a
5 predetermined format within the memory.

1 12. The wireless access point of claim 11, wherein:
2 said controller is programmed to generate a services signal, using information
3 from said memory, to be transmitted to one or more wireless client devices within the
4 associated network.

1 13. The wireless access point of claim 12, wherein:
2 said services signal describes services available within the associated network in
3 a format that is readable within a data link layer of the associated network.

1 14. The wireless access point of claim 12, wherein:
2 said services signal describes services using an extensible markup language
3 (XML).

1 15. The wireless access point of claim 12, comprising:
2 a wireless transceiver to wirelessly transmit said services signal.

1 16. The wireless access point of claim 12, wherein:
2 said services signal is transmitted as part of a medium access control (MAC)
3 frame.

1 17. The wireless access point of claim 12, wherein:
2 said controller includes a service abstraction unit to parse the information
3 received from the at least one service discovery server and store the information in the
4 memory.

1 18. An apparatus comprising:
2 a processor to execute one or more programs;
3 a wireless network interface unit, in communication with said processor, to
4 provide wireless communication with a wireless access point in a wireless network; and
5 a module, coupled to said wireless network interface unit, to receive a services
6 signal from the wireless access point that describes service availability in the wireless
7 network and to cause service information to be displayed to a user of the apparatus
8 based on the content of the services signal, wherein said module is capable of receiving
9 said services signal and causing said service information to be displayed during a power
10 save mode of said apparatus when said processor is powered down.

1 19. The apparatus of claim 18, wherein:
2 said services signal is part of a broadcast signal received by the wireless
3 network interface unit.

1 20. The apparatus of claim 18, wherein:
2 said services signal is part of a beacon signal received by the wireless network
3 interface unit.

1 21. The apparatus of claim 18, wherein:
2 said services signal is part of a medium access control (MAC) frame received by
3 the wireless network interface unit.

1 22. The apparatus of claim 21, wherein:
2 said services signal is included within a frame body of said MAC frame.

1 23. The apparatus of claim 22, wherein:
2 said services signal includes at least one information element within said frame
3 body of said MAC frame.

1 24. The apparatus of claim 23, wherein:
2 said at least one information element utilizes at least one information element
3 ID in the range from 32 to 255.

1 25. The apparatus of claim 18, wherein:
2 said services signal describes services using an extensible markup language
3 (XML).

1 26. The apparatus of claim 18, comprising:
2 a main display and an AON display, wherein said service information is
3 displayed on said AON display during a power save mode.

1 27. A method comprising:
2 receiving information relating to services available within a network from one
3 or more service discovery servers;
4 storing the information within a memory in a wireless access point; and
5 generating a services signal to be wirelessly transmitted in the network, using
6 information stored in the memory.

1 28. The method of claim 27, further comprising:
2 transmitting said services signal.

1 29. The method of claim 28, wherein:
2 transmitting said services signal includes broadcasting said services signal to
3 wireless client devices within a coverage area of the wireless access point.

1 30. The method of claim 28, wherein:
2 transmitting said services signal includes transmitting said services signal as
3 part of a wireless beacon signal.

1 31. The method of claim 28, wherein:
2 transmitting said services signal includes transmitting said services signal as
3 part of a medium access control (MAC) frame.

1 32. The method of claim 31, wherein:
2 transmitting said services signal includes transmitting said services signal within
3 a frame body of said MAC frame.

1 33. The method of claim 32, wherein:
2 transmitting said services signal includes transmitting said services signal within
3 an information field of said frame body of said MAC frame.

1 34. The method of claim 27, wherein:
2 said services signal describes services using an extensible markup language
3 (XML).

1 35. The method of claim 27, wherein:
2 said services signal describes services available within the associated network in
3 a format that can be read within a data link layer of the network.

1 36. A system comprising:
2 a wireless access point including:
3 a memory to store information relating to services available in an
4 associated network;
5 a wireless transceiver to provide wireless communication with one or
6 more wireless client devices; and
7 a controller to generate a services signal using information from said
8 memory and to cause said wireless transceiver to transmit said services signal;
9 and
10 a portable computer to receive the services signal from said wireless transceiver
11 and to display network service information to a user of the portable computer based
12 thereon.

1 37. The system of claim 36, wherein:
2 said portable computer can receive a services signal and display network service
3 information to a user when in a power save mode.

- 1 38. The system of claim 36, wherein:
- 2 said wireless transceiver transmits said services signal as part of a medium
- 3 access control (MAC) frame.